

# ADVANCED WEB TECHNOLOGIES

## SYSTEM DESIGN

- **Requirements of the System**

- ➔ **Functional Requirements**

In order to prove the value of the platform and identify any possible lack of functionality, the application should have all the basic features of a regular web-shop. Accordingly, it has been considered that the initial appropriate set of functionalities for this project include those related to browsing and purchasing products.

The detailed behavior expected for the web-shop is described below.

In the home page all products are displayed sorted by recently. From here the user can select a category or their car's parts; then all products belonging to that category or brand will be displayed. Whenever a set of products is listed, those products on sale will be highlighted. Each product thumbnail consists of a picture of the product, its name and price, as well as a list of all color variants available. Clicking on a product thumbnail redirects the user to the product detail page, where besides name and price also a description is shown. Here the user is able to select any color or size(count). In any moment the user can add the selected product to the shopping cart, afterwards the updated cart contents and total price will be displayed.

Accessing the cart details also grants the user the possibility to change the number of units of an item or remove any particular item from the shopping cart. From here the user can choose to start the checkout process, where he is asked to fill a form with shipping information (i.e. shipping address and method) and billing information (i.e. billing address and payment data). During the checkout process the order summary (i.e. the list of purchased items and pricing details) is displayed all along and kept up to date. Right before finishing the checkout process, the user is informed of all introduced shipping and billing information as well as the order summary. Once the checkout process is finished, another summary is shown along with a successful purchase message.

The user can decide to sign up in our systems, in which case he must provide his full name, email address and a password. After signing up he is redirected to his user profile, where he can update his personal data, change his password review his previous orders in detail. While logged in, the user can choose to log out in order to become an anonymous customer. In any moment, he can log in again providing his email address and password.

- ➔ **Non- Functional Requirements**

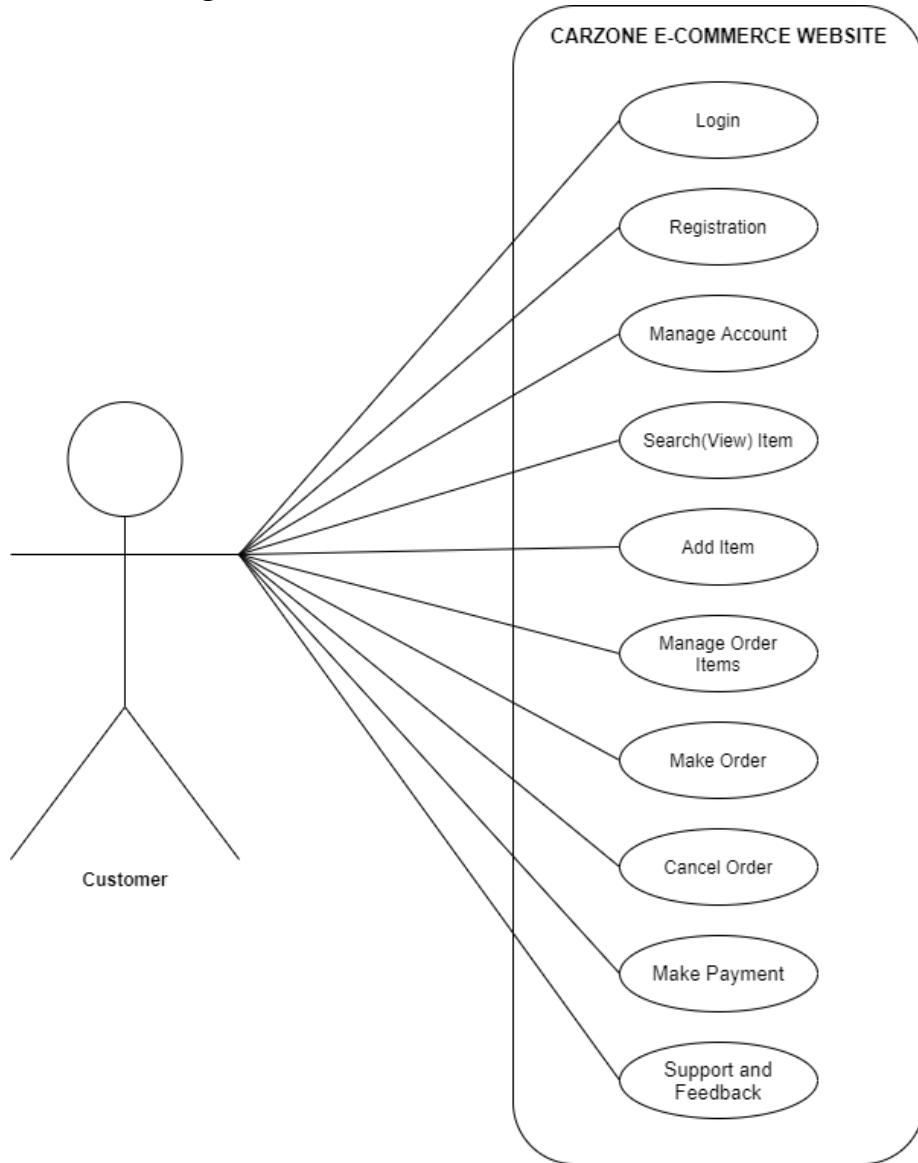
In its first stage, the web-shop template is required mainly to analyze the platform capabilities, show code examples to developers and attract potential customers. For this reason all nonfunctional requirements are highly focused on those areas. Other areas of great importance a well, such as compatibility and performance.

From a developer point of view the quality of the code takes a very important role, so it should be well organized, easy to understand and reusable. Therefore it would be considered a good practice to use variables and functions with self-explanatory names and keep a well commented code. To the extent possible, the generic shop logic should be separated from the most specific code in order to facilitate the use of it as a live documentation of the platform.

The platform should allow to test any web application built on top of it. In order to prove it is allowed, the template should be completed with automated functional tests, being careful of keeping these tests independent from the backend data in use. That way a change in the data, very likely to happen in a template web-shop, will not affect the results. The same principle should be applied to the code in general, to keep the template from being non-functional when the data used is different.

- **UC Diagrams**

→ Customer Diagram

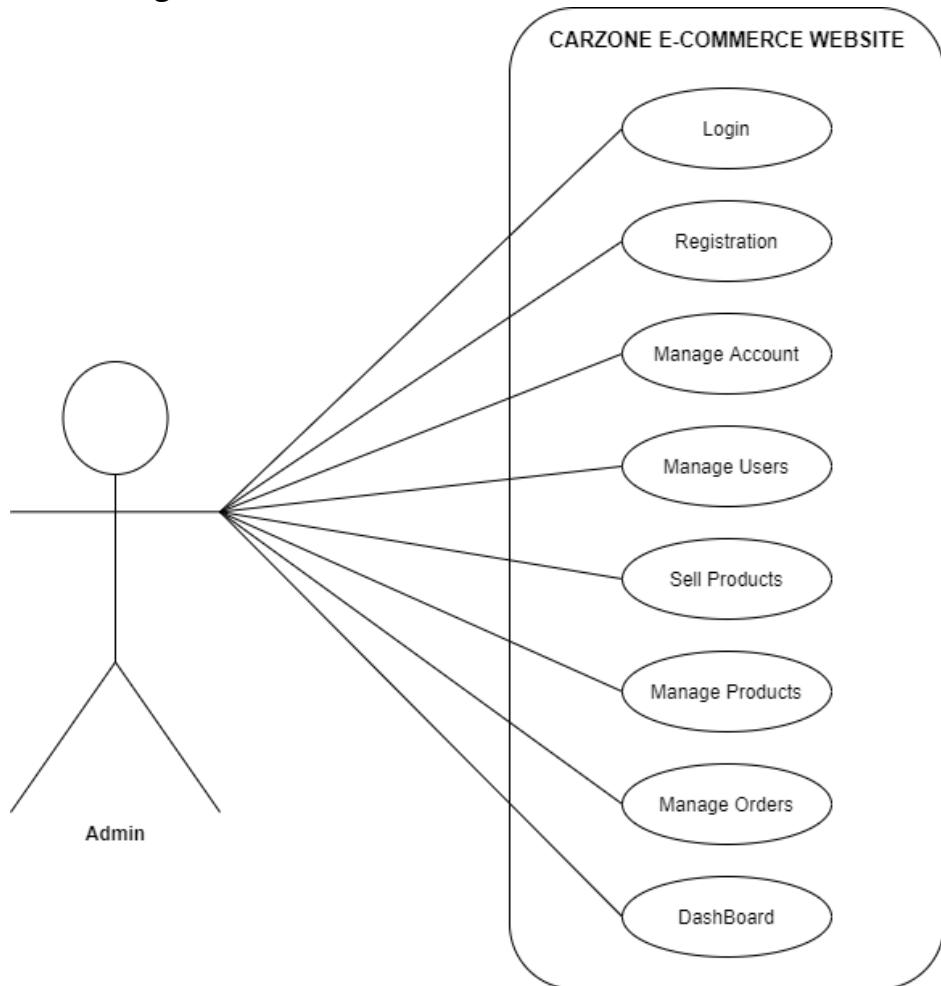


**Customer Use Case Description :**

- **Registration :** If a customer is a new user, customer can request to register page. A register page open and asks information about customer.
- **Login :** The customer can login the system by username and password. The system verifies and matches. If not matches, system gives an error message.
- **Manage Account :** The customer can manage and change own information (password-username etc.)
- **Search(View) Item :** Customer can search an item by selecting parameters or entering the name of the product. System searches in database and gives results to the customer.
- **Add Item :** Customer can add an item in to the own order. The system stores items and track the information about the product.
- **Manage Order Items :** Customer can manage own order such as deleting, increase the number of product. And system shows the each and total price of the products.

- **Make Order :** After the shopping, customer can make an order by looking each product and each price of the product.
- **Cancel Order :** If customer wants, he/she can cancel order and then can get back the money back.
- **Make Payment :** After shopping finishes and when customer confirms the own order, system directs the customer to the payment page. Customer enters bank-card information to buy the products. If informations are valid, customer can buy, if not system gives error message.
- **Support and Feedback :** Customer can get help from system admin if needs and also customer can give feedback about products, some advice etc. to the system

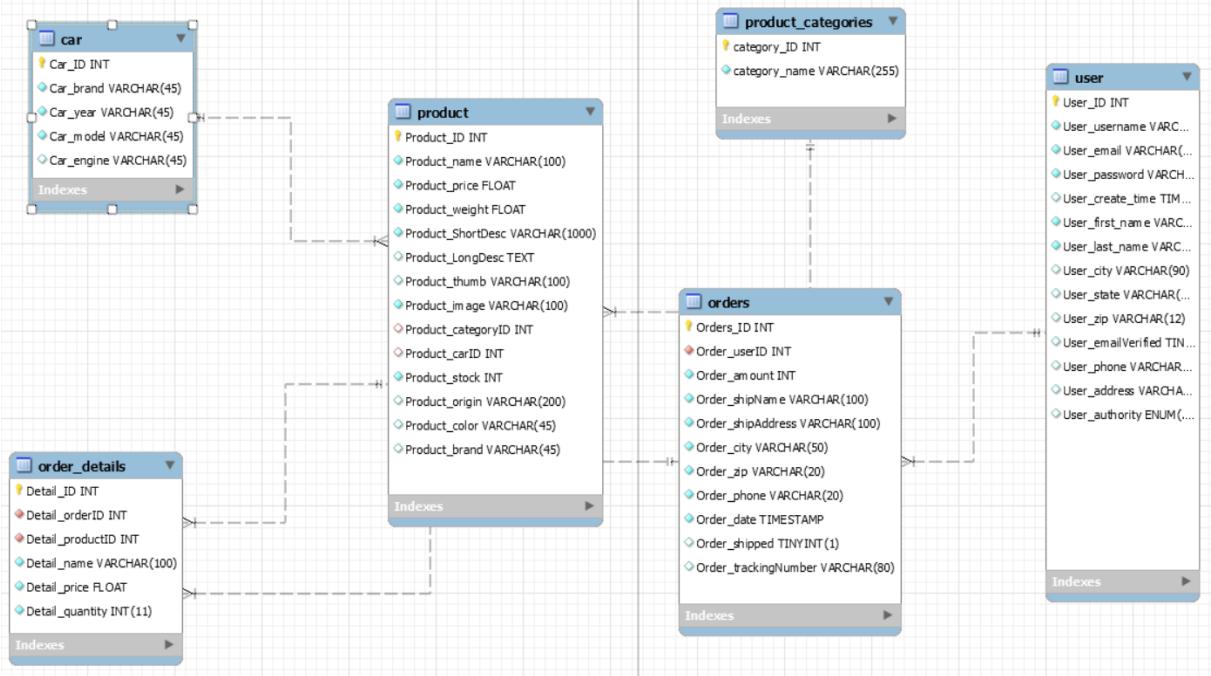
### → Admin Diagram



### Admin Use Case Description :

- **Registration :** If an admin is a new user, admin can request to register page. A register page open and asks information about admin.
- **Login :** The admin can login the system by username and password. The system verifies and matches. If not matches, system gives an error message.
- **Manage Account :** The admin can manage and change own information (password-username etc.)
- **Manage Users :** The admin can manage the users and also depends on the request of the customer, admin can help and manage.
- **Sell Products :** The admin can sell the products by website
- **Manage Products :** The admin can manage the products. He/she can add, update or delete products.

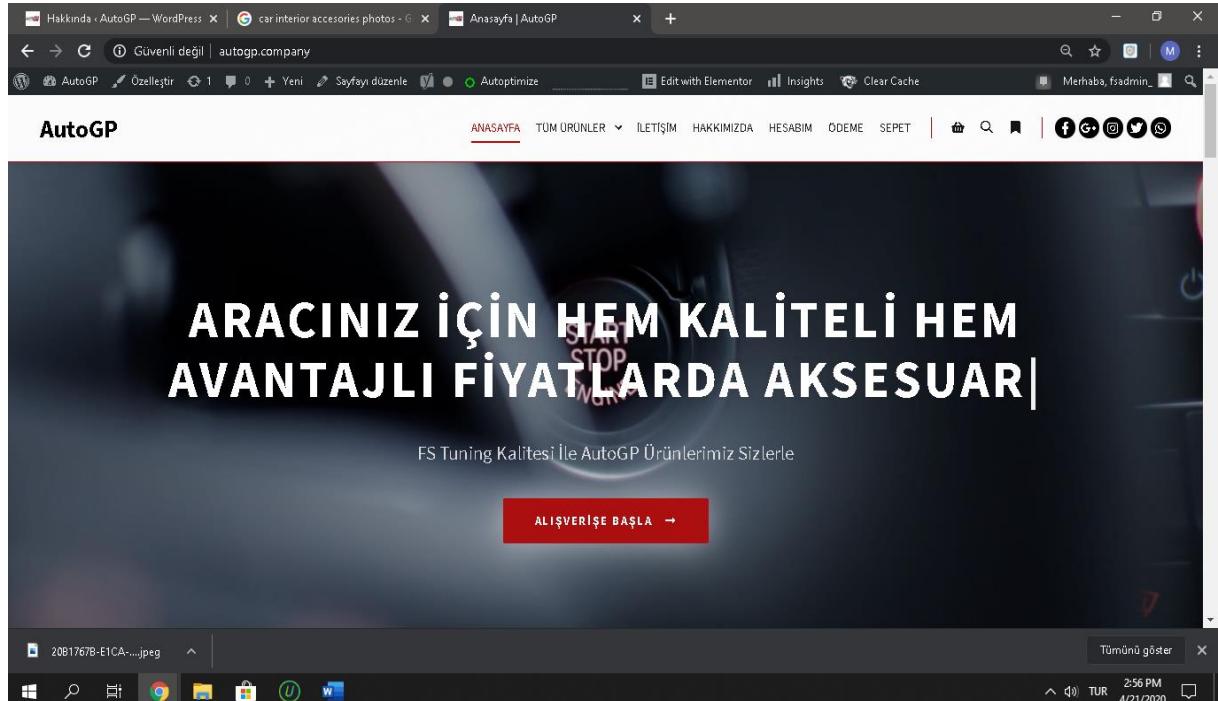
- **Manage Orders :** The admin can manage the orders which are confirmed or cancelled by the customers.
- **Dashboard :** The Dashboard provides admin direct access to important tools for faster and more convenient management.
- **Database Schema**



- **Prototypes**

This website prototype will include the essential functionality such as products review, add products to shopping cart, purchase products so on.

➔ Picture below shows main page of the website prototype.



➔ Users are able to view all the products as listed by best seller or item on sales and prices of the auto parts.

Hakkında | AutoGP — WordPress | car interior accessories photos - G | Anasayfa | AutoGP

Güvenli değil | autopg.company

AutoGP | Özelleştir | 1 | Yeni | Sayfayı düzenle | Autopimize | Edit with Elementor | Insights | Clear Cache | Merhaba, fadmin\_ | M | : |

ANASAYFA TÜM ÜRÜNLER İLETİŞİM HAKKIMIZDA HESABIM ÖDEME SEPET |

VİTRİN

BEST FROM THE BEST!

Araç İçi Kablosuz Şarj Ünitesi / Araç İçi Ürünler / Elektrik Ürünleri

Araç İçi Kablosuz Şarj Ünitesi / Araç İçi Ürünler / Elektrik Ürünleri

Araç İçi Kablosuz Şarj Ünitesi / Elektrik Ürünleri / BMW F30 KABLOSUZ ŞARJ ÜNİTESİ CİHAZI STANDI 2015 / 2016

Windows | Search | Task View | Google | File Explorer | Play Store | Start | 2:59 PM | 4/21/2020

Hakkında | AutoGP — WordPress | car interior accessories photos - G | Anasayfa | AutoGP

Güvenli değil | autopg.company

AutoGP | Özelleştir | 1 | Yeni | Sayfayı düzenle | Autopimize | Edit with Elementor | Insights | Clear Cache | Merhaba, fadmin\_ | M | : |

ANASAYFA TÜM ÜRÜNLER İLETİŞİM HAKKIMIZDA HESABIM ÖDEME SEPET |

Araç İçi Kablosuz şarj Ünitesi / Araç İçi Ürünler / Elektrik Ürünleri

Araç İçi Kablosuz şarj Ünitesi / Araç İçi Ürünler / Elektrik Ürünleri

Araç İçi Kablosuz şarj Ünitesi / Araç İçi Ürünler / Elektrik Ürünleri

Araç İçi Kablosuz şarj Ünitesi / Araç İçi Ürünler / Elektrik Ürünleri

WV TİGUAN KABLOSUZ ŞARJ ÜNİTESİ CİHAZI STANDI 2016+

WV TİGUAN KABLOSUZ ŞARJ ÜNİTESİ CİHAZI STANDI 2009/2016

WV GOLF 7 KABLOSUZ ŞARJ ÜNİTESİ CİHAZI STANDI 2013/2020

WV FOCUS 4 KABLOSUZ ŞARJ ÜNİTESİ CİHAZI STANDI 2014+

6825,00 6825,00 6825,00 6825,00

» Tüm Ürünleri Gör

autogp.company/urun/vw-golf-7-kablosuz-sarj-unitesi-cihazi-standi-2013-2020/

Windows | Search | Task View | Google | File Explorer | Play Store | Start | 3:04 PM | 4/21/2020

Hakkında | AutoGP — WordPress | Güvenli değil | autogp.company

AutoGP | Özelleştir | 1 | Yeni | Sayfa düzenley | Autopimize | Edit with Elementor | Insights | Clear Cache

ANASAYFA TÜM URÜNLER İLETİŞİM HAKKIMIZDA HESABIM ÖDEME SEPET

Mehmet, fadmin\_

**AutoGP**

**» TOM DRONLARI İNCELE**

## SIK KULLANILAN KATEGORİLER

ARAÇ DIŞI ÜRÜNLER (12)

ARAÇ İÇİ KABLOSUZ ŞARJ ÜNİTESİ (21)

ARAÇ İÇİ ÜRÜNLER (22)

3:02 PM TUR 4/21/2020

Hakkında | AutoGP — WordPress | Güvenli değil | autogp.company

AutoGP | Özelleştir | 1 | Yeni | Sayfa düzenley | Autopimize | Edit with Elementor | Insights | Clear Cache

ANASAYFA TÜM URÜNLER İLETİŞİM HAKKIMIZDA HESABIM ÖDEME SEPET

Mehmet, fadmin\_

**» Tüm Ürünleri Gör**

TÜRKİYE İÇİ ÜCRETSİZ KARGO

7 GÜN İADE SÖRECİ

GÜVENLİ ÖDEME İŞLEMİ

ARACINIZ İÇİN İSTEDİĞİNİZİ BULAMADIYSANIZ  
GENEL WEB SİTEMİZİ ZİYARET EDİN

GO FSTUNING SHOP →

3:04 PM TUR 4/21/2020

Hakkında | AutoGP — WordPress | car interior accessories photos - G | Anasayfa | AutoGP

Güvenli değil | autogp.company

AutoGP | Çözleştir | 1 | Yeni | Sayfayı Düzenle | Autopimize | Edit with Elementor | Insights | Clear Cache

Mehmet, fadmin\_

ANASAYFA TÜM ÜRÜNLER İLETİŞİM HAKKIMIZDA HESABIM ÖDEME SEPET

AutoGP

ARACINIZ İÇİN İSTEDİĞİNİZİ BULAMADIYSANIZ  
GENEL WEB SİTEMİZİ ZİYARET EDİN

GO FSTUNING SHOP

ARACINIZIN FOTOGRAFINI GÖNDERİN PAYLAŞALIM

ILETİŞİM

0 (216) 313 41 91  
info@fstuningshop.com  
<https://www.fstuningshop.com/>

GÜVENLİ ALIŞVERİŞ

Gizlilik Politikası  
Kullanım Sözleşmesi  
Ödeme Ve Teslimat  
İade Şartları  
Halkımızda  
SSS

GENEL SİTEYE GİT

FSTUNING AUTO MARKET

AutoGP2020 - Tüm Hakları Saklıdır.

https://www.fstuningshop.com

TUR 3:05 PM 4/21/2020

Hakkında | AutoGP — WordPress | car interior accessories photos - G | Tüm Ürünler | AutoGP

Güvenli değil | autogp.company/ürünler/

AutoGP | Çözleştir | 1 | Yeni | Autopimize | Edit with Elementor | Insights | Clear Cache

Mehmet, fadmin\_

ANASAYFA TÜM ÜRÜNLER İLETİŞİM HAKKIMIZDA HESABIM ÖDEME SEPET

AutoGP

TÜM ÜRÜNLER

START STOP ENGINE

autogp.company/urun/bmw-f30-kablosuz-sarj-unitesi-cihazi-standi-2015-2018-5serisi/

Ürünlerde ar...

FILTER BY PRICE

Filtrele First: ₺70 — ₺1.170

PRODUCT CATEGORIES

TUR 3:28 PM 4/21/2020

- As soon as user clicked on quick review as shown in diagram, it will show the product info and user can add products to cart.

VW GOLF 7.5 R BODY KİT TAMPON SETİ  
KOMLE 2017+

\$5,757,90

Sepete Ekle

Stock Kodu: VWGOL7,5R  
Kategoriler: Araç Diji Ürünler, Body Kit

Açıklama İnceleme (0)

- When user added product to cart, non-member will need to sign up and proceed to shopping cart.

"Vw Golf 7.5 R body kit tampon seti komle 2017+" sepetinize eklandı.

VW GOLF 7.5 R BO  
KOMLE 2017+

\$5,757,90

1

Stock Kodu: VWGOL7,5R  
Kategoriler: Araç Diji Ürünler, Body Kit

SEPET

AUDI A6 KABLOSUZ ŞARJ ÜNİTESİ CİHAZI STANDI 2013/2018	1 x \$725,00
BMW F30 KABLOSUZ ŞARJ ÜNİTESİ CİHAZI STANDI 2015 / 2018 3SERİSİ	1 x \$725,00
VW GOLF 7.5 R BODY KİT TAMPON SETİ KOMLE 2017+	1 x \$5,757,90

ARA TOPLAM: \$7,207,90

Sepeti görüntüle

→ View cart

The screenshot shows a shopping cart page for AutoGP. At the top, there are two tabs: "Hakkında" and "Sepet | AutoGP". The "Sepet | AutoGP" tab is active. Below the tabs, the URL "Güvenli değil | autogp.company/sepet/" is visible. The header includes the AutoGP logo, navigation links for ANASAYFA, TÜM ÜRÜNLER, İLETİŞİM, HAKKIMIZDA, HESABIM, ÖDEME, and SEPET, as well as social media icons for Facebook, Google+, Twitter, and Instagram. A search bar and a message "Merhaba, fadmin..." are also present.

The main content area is titled "SEPET". It displays a table of items in the cart:

Örün	Fiyat	Miktar	AraToplam
Audi A6 kablosuz şarj ünitesi cihazı standı 2013/2018	₺725,00	1	₺725,00
BMW F30 kablosuz şarj ünitesi cihazı standı 2015/2018 3 serisi	₺725,00	1	₺725,00
VW Golf 7.5 R body kit tampon seti komple 2017+	₺5.757,90	1	₺5.757,90

Below the table, there are buttons for "Kupon Kodu", "Kupon kullan", and "Sepeti güncelle". The bottom of the screen shows the Windows taskbar with various pinned icons and the system tray indicating the date and time as 4/21/2020 at 3:54 PM.

This screenshot shows the final summary page of the shopping cart process. The top part is identical to the previous screenshot, featuring the "SEPET" tab and the same item list.

The main content area is titled "SEPET TOPLAMLARI". It shows the total amount "AraToplam" as "₺7.207,90". There are two radio buttons for shipping: "Ücretsiz gönderim" (selected) and "Mağazadan teslim". Below this, it says "Gönderim hedefi: İstanbul." and "Adresi değiştirin".

At the bottom, the total "Toplam" is displayed as "₺7.207,90" again, followed by a button labeled "Ödeme sayfasına git". The bottom of the screen shows the Windows taskbar and system tray information.

## → Payment

The screenshot shows the payment page for AutoGP. At the top, there's a banner asking if you have a coupon code. Below it, there are two main sections: 'FATURA DETAYLARI' (Billing Details) and 'FARKLI BİR ADRESE GÖNDERİLSİN Mİ?' (Send to a different address?). The 'Fatura Detayları' section contains fields for 'Adı\*' (Name\*) and 'Soyadı\*' (Last Name\*), both marked with red asterisks indicating required fields. There's also a 'Firma adı (isteğe bağlı)' (Company name (optional)) field. The 'Farklı bir Adrese Gönder' (Send to a different address) section has a checkbox labeled 'Siparişinize ilgili notalar (isteğe bağlı)' (Optional notes related to your order). The bottom of the page shows the Windows taskbar and a system tray icon.

This screenshot shows the payment summary page. It lists items: 'Bmw f30 kablouz şarj ünitesi cihaç standı 2015 / 2018 3serisi x 1' at 6725,00 and 'Vw Golf 7.5 R body kittanpontseti konle 2017+ x 1' at 65.757,90. The total amount is shown as 'Ara Toplam' (Subtotal) at 67.207,90. Below this, there are two radio button options for delivery: 'Öcretsiz gönderim' (Free shipping) and 'Mağazadan teslim' (Delivered from store). A note at the top of this section says: 'Ödemenizi doğrudan banka hesabınız yapabilirsiniz. Lütfen ilgili Sipariş Numarasını Ödemenizin eşleştirme kamerasına yazınız. Ödemeniz onaylanmadıkça siparişiniz gönderilmeyecektir.' (You can pay directly to your bank account. Please enter the correct order number in the payment slip. Your order will not be shipped until it is approved.) At the bottom, there's a 'Banka havalesi/EFT' (Bank transfer/EFT) section with a note about card processing fees. A large 'Sipariş onayla' (Approve order) button is prominently displayed. The bottom of the page shows the Windows taskbar and a system tray icon.

- **Framework**
  - **Frontend:** HTML5, CSS3, JavaScript
  - **Backend:** Django (Python Web Development Framework)
  - **Database:** MySql
  - **Version Control:** Github
- 
- **Schedule of Laboratory 5-13**
  - **Lab 5 :** Basic version of the web site
  - **Lab 6 :** Implementation of the database
  - **Lab 7 :** Search part for the products
  - **Lab 8 :** Login ability for admin and customer
  - **Lab 9 :** Barcode Scanning
  - **Lab 10 :** Favorite Product List
  - **Lab 11 :** Changing currency
  - **Lab 12 :** Charts implementation
  - **Lab 13 :** Test and Final Application